

**Studies on the Chinese Coleophoridae (Lepidoptera): the
Coleophora absinthii group, with description
of one new species**

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Abstract: The present paper reports seven species of the *Coleophora absinthii* group from China. Among them, one species, *Coleophora fengzianica* sp. nov. is described as new to science and four species (*Coleophora absinthii* Heinemann et Wocke, *Coleophora amarchana* Falkovitsh, *Coleophora artemisicolella* Bruand and *Coleophora kudrosella* Baldizzone) are recorded for the first time from this country.

Key words: Lepidoptera; Coleophoridae; *Coleophora*; new species; China

The *Coleophora absinthii* group consists of more than forty species, which are mainly distributed in the Palaearctic Region^[1,3~9]. Up to date, two species have been recorded from China^[2]. This paper reports seven species, with one species described as new to science and four species newly added to the Chinese fauna. The genitalia of the new species are illustrated and a key to the Chinese species of the *C. absinthii* group is given. All specimens are deposited in the Department of Biology, Nankai University, Tianjin, China.

Key to the Chinese species of *Coleophora absinthii* group

- | | |
|--|-------------------------------------|
| 1. Antenna white and brown alternately | 2 |
| Antenna evenly white or greyish white | 5 |
| 2. Wing expanse more than 12.0 mm | 3 |
| Wing expanse less than 12.0 mm | 4 |
| 3. One of cornuti remote from other joined two | <i>kudrosella</i> Baldizzone et Oku |
| Several of cornuti remote from other joined two | <i>amarchana</i> Falkovitsh |
| 4. Apex of sacculus blunt; cornutus simple | <i>yomogiella</i> Oku |
| Apex of sacculus acute; cornutus with irregular base | <i>kurokoi</i> Oku |
| 5. Wing expanse more than 13.0 mm; transtilla subrectangular; cornutus nearly straight | |
| | <i>absinthii</i> Heinemann et Wocke |
| Wing expanse less than 13.0 mm | 6 |

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6. Streaks on forewing distinct; transtilla narrowly subrectangular; apex of sacculus somewhat blunt; cornutus strongly curved, simple *fengxianica* sp. nov.
 Streaks on forewing obscure; transtilla narrowly cestiform; apex of sacculus obliquely acute; cornutus nearly straight, with large base *artemisicolella* Bruand

1 *Coleophora absinthii* Heinemann et Wocke, 1877 New Record to China

Coleophora absinthii Heinemann et Wocke, 1877, Schmett. Dtl. Schweiz, (2)3(2): 602.

Material examined: 2 ♂♂, Gongliu (43.4°N, 82.2°E), Xinjiang Uygur Autonomous Region, alt. 1 100 m, June 28, 1994, leg. An Xincheng; 1 ♂, Beitun (47.3°N, 87.8°E), Xinjiang, alt. 530 m, July 20, 1994, leg. Li Houhun and Qin Hongyan; 1 ♂, 1 ♀, Harbin (45.7°N, 126.6°E), Heilongjiang Province, alt. 150 m, July 23, 1997, leg. Li Houhun; 1 ♂, Heihe (50.2°N, 127.4°E), Heilongjiang, alt. 400m, July 25, 1997, leg. Li Houhun; 2 ♂♂, Nenjiang (49.1°N, 125.2°E), Heilongjiang, alt. 300 m, July 29, 1997, leg. Li Houhun; 1 ♀, Wudalianchi (48.7°N, 126.2°E), Heilongjiang, alt. 270 m, July 30, 1997, leg. Li Houhun.

Distribution: China: Xinjiang, Heilongjiang; Europe.

2 *Coleophora amarchana* Falkovitsh, 1975 New Record to China

Coleophora amarchana Falkovitsh, 1975, Insects of Mongolia, 3: 336.

Material examined: 2 ♂♂, Huangyuan (36.7°N, 101.3°E), Qinghai Province, Aug. 16~22, 1995, leg. Zhu Lanfang.

Distribution: China: Qinghai; Mongolia.

3 *Coleophora artemisicolella* Bruand, [1855] New Record to China

Coleophora artemisicolella Bruand, [1855], Mém. Soc. Emul. Doubs, 6(2): 97.

Material examined: 1 ♂, Nenjiang (49.1°N, 125.2°E), Heilongjiang Province, alt. 300 m, July 29, 1997, leg. Li Houhun.

Distribution: China: Heilongjiang; Japan; Europe.

4 *Coleophora fengxianica* Li et Zheng, sp. nov. (Figs. 1~3)

Wing expanse: Male 12.0 mm. Head shining white, medial portion longitudinally buff. Postocular scales ochreous brown. Labial palpus porrect, second segment slightly longer than diameter of compound eye, inner surface white, apical half tinged with pale yellow, outer surface ochreous-fuscos, basal 1/3 white, apex dorsally white and ventrally with short fuscous tuft; third segment about half length of second, white, ventral surface ochreous-fuscos, apex acute. Scales of haustellum white. Antenna: dorsal surface of scape white, edged with pale ochreous, ventral surface ochreous; flagellum white, more or less tinged with pale ochreous. Thorax greyish white, lateral margins ochreous-fuscos. Tegula white, basal portion somewhat greyish. Forewing: upper surface greyish white, scattered with a few ochreous brown scales on fold and distal portion; basal half

of costa brown, streaks along main veins ochreous, distinctly broad; ventral surface brown, slightly tinged with ochreous; terminal cilia ochreous white, tornal cilia whitish grey. Hindwing: both surfaces brown, cilia greyish brown. Fore and mid legs pale ochreous-fuscous, mixed with greyish white scales. Hind leg greyish white, outer surface of tibia with longitudinal ochreous-fuscous streak medially. Abdomen (Fig. 1): setal patches of third tergum elongate, about twice as long as wide, with 55 spiniform setae.

Male genitalia (Figs. 2~3): Gnathos oval, basal arms broad, with four bristles. Tegumen subtrapezoid, lateral and anterior margins gently concaved, caudal margin deeply concaved; pedunculi almost as long as tegumen, with sclerotized subtriangular plate near middle. Transtilla narrow, elongately subrectangular, both edges incurved. Valva narrow, with rounded apex; costa curvate, medially convex, basal $1/4$ heavily sclerotized. Valvula broad and short, almost trapezoid, base extending to $1/2$ of costa, longer than width of valva, ventral surface with long setae. Sacculus relatively broad; ventral margin nearly as long as $2/3$ length of costa, straight, narrow, its inner edge curved and more sclerotized; outer margin oblique, slightly arched, inner edge sclerotized, with short setae; dorsal process thorn-like, large, strongly sclerotized, apex somewhat blunt, upwardly nearly reaching apical $1/4$ of costa, a small sclerotized tooth at inside of base. Juxtal rods sclerotized, cestiform, more or less S-shaped, narrowest at apical $1/3$; dorsal margin of apical $1/3$ almost straight, with fine teeth, ventral margin arched, apex acute; left and right rods about same length and shape; juxta short and broad, subtriangular; lamina distinctly broad, weakly sclerotized; cornutus strongly curved medially, apex acute, inner edge with a small process at middle; appendix of outer sheath longer than juxtal rods, without coils.

Female: Unknown.

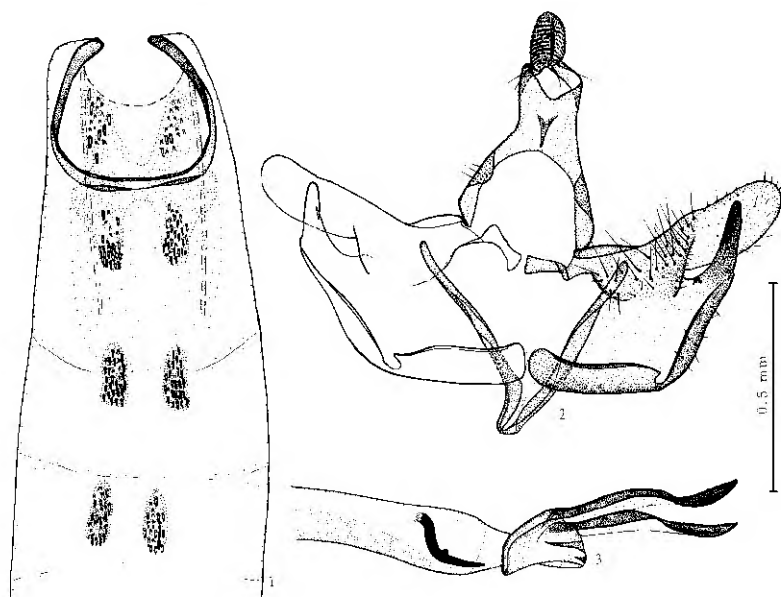
Holotype ♂, Fengxian (33.9°N , 106.5°E), Shaanxi Province, alt. 1 050 m, Aug. 23, 1987, leg. Li Houhun, genitalia slide no. L96103.

Diagnosis: *Coleophora fengxianica* sp. nov. is closely related to *C. absinthii* Heinemann et Wocke, but can be separated from the latter by the male genitalia: transtilla narrower, valvula and sacculus wider, dorsal process of sacculus longer, cornutus strongly curved and juxtal rods differently shaped.

5 *Coleophora kudrosella* Baldizzone et Oku, 1988 New Record to China

Coleophora kudrosella Baldizzone et Oku, 1988, Tyô to Ga, 39(3): 214.

Material examined: 21 ♂♂, 12 ♀♀, Urumqi (43.8°N , 87.6°E), Xinjiang Uygur Autonomous Region, alt. 920 m, Aug. 4~12, 1994, leg. Li Houhun and Qin Hongyan; 6 ♂♂, 5 ♀♀, Beitun (47.3°N , 87.8°E), Xinjiang, alt. 530 m, July 20~22, 1994, leg. Li Houhun and Qin Hongyan; 1 ♂, 2 ♀♀, Jinghe (44.6°N , 82.9°E), Xinjiang, Aug. 22, 1994, leg. Duoliken Baishanbayi; 1 ♂, Nenjiang (49.1°N , 125.2°E), Heilongjiang Province, alt. 300 m, July 29, 1997, leg. Li Houhun; 1 ♂, Dong Ujimqin Qi (Uliastai) (45.5°N , 117.0°E), Inner Mongolia Autonomous Region, alt. 920 m, Aug. 8, 1987, leg. Li Houhun; 6 ♂♂, Xilinhot



Figs. 1~3 *Coleophora fengxianica* Li et Zheng, sp. nov.

1. Abdomen; 2. male genitalia; 3. phallus complex (slide no. L96103)

图1~3 凤县尖鞘蛾 *Coleophora fengxianica* Li et Zheng, 新种

1. 腹部; 2. 雄性外生殖器; 3. 阳茎复合体 (玻片号 no. L96103)

(43.9°N, 116.0°E), Inner Mongolia, alt. 1 030 m, Aug. 9~10, 1997, leg. Li Houhun.

Distribution: China: Xinjiang, Inner Mongolia, Heilongjiang; Japan.

6 *Coleophora kurokoi* Oku, 1974

Coleophora kurokoi Oku, 1974, Kontyû, 42(3): 256.

Distribution: China: Yunnan, Zhejiang (Baldizzone, 1989); Japan.

7 *Coleophora yomogiella* Oku, 1974

Coleophora yomogiella Oku, 1974, Kontyû, 42(3): 254.

Material examined: 1 ♂, Yuexi (30.4°N, 116.3°E), Anhui Province, July 25, 1995, leg. Hu Xiangfu; 1 ♂, Heihe (50.2°N, 127.4°E), Heilongjiang Province, alt. 170 m, July 26, 1997, leg. Li Houhun.

Distribution: China: Anhui, Heilongjiang, Yunnan (Baldizzone, 1989); Korea; Japan.

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中国鞘蛾研究(鳞翅目:鞘蛾科):尖鞘蛾组研究及一新种记述

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摘要: 该文记载了尖鞘蛾组 (*Coleophora absinthii* group) 7 个分布于中国的种, 其中有 1 个新种和 4 个中国新记录种: 蒿尖鞘蛾 *Coleophora absinthii* Heinemann et Wocke 新记录于新疆(巩留、北屯)和黑龙江(哈尔滨、黑河、嫩江、五大连池), 国外分布欧洲; 沟尖鞘蛾 *Coleophora amarchana* Falkovitsh 新记录于青海(湟源), 国外分布蒙古; 野艾尖鞘蛾 *Coleophora artemisicolella* Bruand 新记录于黑龙江(嫩江), 国外分布日本和欧洲; 凤县尖鞘蛾(新种) *Coleophora fengxianica* sp. nov. 分布陕西(凤县), 该种与蒿尖鞘蛾很相似, 但雄性外生殖器的抱器背基突更窄、抱器小瓣和抱器腹更宽、抱器腹背突更长、角状器强烈弯曲以及阳茎端环棒的形状不同可以和后者相区别; 平须尖鞘蛾 *Coleophora kudrosella* Baldizzone et Oku 新记录于新疆(乌鲁木齐、北屯、精河), 内蒙古(锡林浩特)和黑龙江(嫩江), 国外分布日本; 茼蒿尖鞘蛾 *Coleophora kurokoi* Oku 分布云南(丽江), 国外分布日本; 钝尖鞘蛾 *Coleophora yomogiella* Oku 分布安徽(岳西), 黑龙江(黑河), 云南(丽江), 国外分布韩国和日本。文中提供了国内已知种的分种检索表和新种的外生殖器特征图。

模式标本保存在南开大学生物系。

关键词: 鳞翅目; 鞘蛾科; 鞘蛾属; 新种; 中国

中图分类号: Q969.425.9

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